linkedin.com/in/changrichmond

# **SOFTWARE ENGINEER**

## **EXPERIENCE**

#### GumGum

Software Engineer Sept 2016 - Present

- Visual Intelligence (VI) Service using computer vision to detect brand value in social media images
  - o *Big data pipeline* ingests ~15 million social media posts daily through AWS Kinesis, parses and processes the data in Apache Storm, and stores the data in Amazon S3 and Elasticsearch
  - o Java/Spring web application hosted on AWS EC2, allows users to analyze brand engagement on social media
- Developed a data pipeline to ingest publisher images as a new data source for VI
- Rewrote image/analytics endpoints of the VI API to use a common query filter so user searches carried across pages
- Migrated a Java web service that consumes the GNIP (Twitter data) stream to use GNIP 2.0
- Scripted in Python to generate reports (top keywords, Sports Sponsorship analysis), provide data to other teams, update data in the Elasticsearch database, and interact with third-party services' APIs

## **UCI Office of Information Technology**

Programmer Analyst II, Student Financials

Jul 2015 - Sept 2016

- Migrated customers and financial data to <u>Ellucian</u> student system. Used T-SQL/Oracle to filter/cleanse data.
- Modified two Java web apps (Tomcat Servlet/Jasper Report, Spring/Hibernate) to support variable rate institutional loans and allow users view/modify them. Fixed bugs in the existing web application logic.
- Scripted Bash process to securely transfer and archive reports from Bank of America to school departments

## Student Programmer

Dec 2012 – Jun 2015

- Developed a Java Spring/Hibernate web application within the existing campus-wide student billing system to allow staff to manage lab fees for academic quarters
- Wrote SQL and Bash scripts to migrate and convert 100+ tables from the old financial system
- Wrote and unit tested a reusable Java module replacing maintenance downtime logic for 3 web applications

#### Web Data Extraction - Freelance

Nov 2012 – Jan 2013, Dec 2014

- Developed C# programs to extract property tax data on websites into structured reports for clients
- Optimized C# URL to TLD conversion program from a run time of 5-7 minutes to 6-10 seconds

# **PROJECTS**

Ludum Dare 29, 30, 33 (48-hour themed competition where games/assets are developed in solo)

- Boat Simulator (Apr. 2014, Java, LibGDX) Sandbox with a boat in buoyant water
- Fairy Catcher (Aug. 2014, Java, LibGDX) Arcade game where player switches planes to catch fairies
- Iron Cog Goblin (Aug. 2015, C#, Unity 2D) Stealth 2D platformer where goblin collects treasure

#### Advanced Database System Course

Apr 2015 - Jun 2015

- Designed and implemented major components of a relational database system in C++
- Read/write records to disk, CRUD operations on records, indexing (top-down B+ tree), nulls and variable length strings

## BoardGameServer (https://github.com/Inf-122-Team-3/finalprojectteam3)

Feb 2014 - Mar 2014

- Developed a modular server-client in Java to allow any board game to be played
- Collaborated and presented in a team of 9 members. Led UI team of 3 members.

### **EDUCATION**

# University of California, Irvine (Cum Laude)

*June 2015* 

• B.S., Computer Science; B.S., Software Engineering

GPA: 3.8

## **SKILLS**

- <u>Languages</u>: Java, C#/LINQ, C++, Python; TSQL/Oracle, Elasticsearch; Bash, HTML/CSS/JS
- Tools: Visual Studio, Eclipse, IntellJ, Unity; Git, SVN; UNIX; Spring/Hibernate, Apache Storm; Selenium; XPath